



SECRETARY

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

May 11, 2011

COMMISSION VOTING RECORD

DECISION ITEM: SECY-11-0024

TITLE: USE OF RISK INSIGHTS TO ENHANCE THE SAFETY
FOCUS OF SMALL MODULAR REACTOR REVIEWS

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of May 11, 2011.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Jaczko
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
OGC
EDO
PDR

VOTING SUMMARY - SECY-11-0024

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. JACZKO	X				X	4/22/11
COMR. SVINICKI	X				X	4/29/11
COMR. APOSTOLAKIS	X				X	4/14/11
COMR. MAGWOOD	X				X	4/27/11
COMR. OSTENDORFF	X				X	4/20/11

COMMENT RESOLUTION

In their vote sheets, all Commissioners approved the staff's recommendation and provided some additional comments. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on May 11, 2011.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Chairman Gregory B. Jaczko
SUBJECT: SECY-11-0024 – USE OF RISK INSIGHTS TO ENHANCE THE SAFETY FOCUS OF SMALL MODULAR REACTOR REVIEWS

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below X Attached _____ None _____

I approve of the staff's recommended risk-informed and integrated review framework for the near-term efforts pertaining to integral pressurized-water reactor (iPWR) designs, and of the staff's longer term plans for a new risk-informed and performance-based regulatory structure for the licensing of advanced reactor designs. I believe this is an excellent example of the type of proactive planning that places us in the best position to deliberate on these issues, and I appreciate the staff's hard work in developing recommendations to ensure a safety focused and efficient review of iPWR applications.

I also support, in principle, Commissioner Apostolakis' proposal for the staff to explore the feasibility of including risk information in determining whether a system, structure or component is or is not safety-related. The proposal, if feasible, should enhance safety by ensuring all risk significant equipment receives the same treatment that is currently reserved for safety-related equipment. The staff should consult with the Office of General Counsel to determine if there are legal obstacles to this approach, namely to determine if this can be done without a rule change.

/RA/
SIGNATURE

4/22/11
DATE

Entered on "STARS" Yes X No _____

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER SVINICKI
SUBJECT: SECY-11-0024 – USE OF RISK INSIGHTS TO
ENHANCE THE SAFETY FOCUS OF SMALL
MODULAR REACTOR REVIEWS

Approved XX Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached XX None ___



SIGNATURE

04/29 /11

DATE

Entered on "STARS" Yes No _____

**Commissioner Svinicki's Comments on SECY-11-0024
Use of Risk Insights to Enhance the Safety Focus of Small Modular Reactor Reviews**

I approve the use of the risk-informed and integrated review framework for staff pre-application and application review activities pertaining to iPWR design applications. I approve consolidation of staff activities currently underway regarding a risk-informed regulatory structure into the staff's plan discussed in this paper for the longer term development of a recommendation related to a new risk-informed regulatory structure. I also support Commissioner Apostolakis' proposal for the staff to explore the feasibility of including risk information in determining whether a small, modular reactor system, structure, or component is or is not safety-related and I support Commissioner Magwood's suggestion that this question be explored for its potential application to the overall regulatory framework. Finally, I do not approve subsuming the activities related to this plan into the Task Force for Assessment of Options for a More Holistic Risk-Informed, Performance-Based Regulatory Approach. Although it is reasonable for the staff to communicate these activities with staff of the Task Force, it is important that the activities discussed in SECY-11-0024 continue to be pursued as an independent, staff-directed initiative and that recommendations be brought forward to the Commission, as currently planned.



Kristine L. Svinicki 04/27/11

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner Apostolakis
SUBJECT: SECY-11-0024 – USE OF RISK INSIGHTS TO
ENHANCE THE SAFETY FOCUS OF SMALL
MODULAR REACTOR REVIEWS

Approved XX Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached XX None ___



SIGNATURE

4/14/11

DATE

Entered on "STARS" Yes X No _____

Commissioner Apostolakis' Comments on SECY 11-0024, "Use of Risk Insights to Enhance the Safety Focus of Small Modular Reactors Reviews"

I approve the use of the staff's proposed review framework for pre-application and application review activities pertaining to iPWR design applications. In accordance with the Commission's direction, the staff has developed a more risk-informed and integrated review framework consistent with current regulatory requirements and Commission policy statements. I commend the staff for its thoughtful work.

I approve consolidation of staff activities currently underway regarding a risk-informed regulatory structure (i.e., WITS 200700304, 200700305, and 200800305) into the staff's plan discussed in SECY 11-0024 for the longer term development of a recommendation related to a new risk-informed regulatory structure.

I agree with the ACRS¹ that, for the proposed framework to be effective, the design-specific PRAs will have to be more complete than those commonly associated with traditional LWR design certification applications. The staff should also consider the ACRS recommendation to use PIRT-like processes to guide the development of the design-specific review plans.

Looking forward, I believe that a significant enhancement for both safety and review efficiency may be possible. The proposed framework builds upon the voluntary risk-informed rule codified in 10 CFR 50.69. This rule places systems, structures and components (SSCs) into four Risk-Informed Safety Classes (RISCs). These classes are determined by considering the traditional "safety-related" and "nonsafety-related" classification as well as the "new" risk-informed "safety-significant" and "low-safety-significant" categorization. Thus, RISC-1 consists of SSCs that are safety-related and safety-significant; RISC-2 consists of SSCs that are classified as nonsafety-related but are safety-significant; RISC-3 consists of SSCs that are safety-related and nonsafety-significant; and, RISC-4 consists of SSCs that are nonsafety-related and nonsafety-significant. The special treatment requirements imposed on a SSC vary according to its RISC category.

The reason 10 CFR 50.69 considered both the traditional and the new categorization schemes is that it was developed as a voluntary initiative for existing reactors which, of course, had already categorized SSCs as safety-related and nonsafety-related. It would have required a revision to the regulations to change the terminology and meaning of the safety-related categorization. It is worth noting that the process for determining safety significance in 10 CFR 50.69 includes the same criteria as those of the traditional process, as well as risk insights. Therefore, there was a duplication of effort.

A question that arises, then, is whether the traditional process of categorizing SSCs as safety-related and nonsafety-related without the benefit of risk information from PRAs should be perpetuated. Review efficiency will be significantly enhanced if the duplicate efforts of using both the traditional scheme and the new risk-informed process were combined into one. More importantly, the SSC categorization would draw on a broader knowledge basis thus reducing the potential for error. One possible course of action could be to preserve the nomenclature of safety-related and nonsafety-related categories that are in the regulations. The process for placing the SSCs in these two categories would still use the traditional criteria, but would also include risk information. The guidance for doing so is essentially described in RG 1.201.

The staff should explore the feasibility (e.g., regulatory infrastructure changes, resource requirements, and timing for implementation) of including risk information in categorizing SSCs as safety-related and nonsafety-related for the design-specific SMR review plans in both the short and long term. Stakeholder input should be considered, as appropriate. The staff should provide a report to the Commission within five months.

¹ ACRS Report to Chairman Jaczko on SECY-11-0024 dated March 16, 2011.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER MAGWOOD
SUBJECT: SECY-11-0024 – USE OF RISK INSIGHTS TO ENHANCE THE SAFETY FOCUS OF SMALL MODULAR REACTOR REVIEWS

Approved X Disapproved Abstain

Not Participating

COMMENTS: Below X Attached None

I approve of the staff's use of the recommended risk-informed integrated framework for the review of integral pressurized-water reactor (iPWR) design applications. I also approve staff's recommendation to consolidate activities to risk inform a broader, long term regulatory structure. I agree with ACRS' assessment that development of design-specific review plans for iPWRs is essential in ensuring high safety standards are maintained for unique designs.

In addition, I support Commissioner Apostolakis' proposal for the staff to explore the feasibility of including risk information in determining whether a system, structure or component is or is not safety-related. However, I question whether this evaluation can - or should - be limited to SMRs. It may be appropriate for staff to consider this question with regard to our overall regulatory framework.



SIGNATURE

27 April 2011

DATE

Entered on "STARS" Yes X No

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER OSTENDORFF
SUBJECT: SECY-11-0024 – USE OF RISK INSIGHTS TO ENHANCE THE SAFETY FOCUS OF SMALL MODULAR REACTOR REVIEWS

Approved XX Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below XX Attached ___ None ___

I approve the staff's approach to risk-inform SMR pre-application and application reviews. Such an approach could improve the NRC's risk-informed environment in regulatory and management practices. I also approve consolidation of staff activities currently underway as described in SECY-11-0024. In addition, I support Commissioner Apostolakis' proposal for a staff paper to assess the feasibility of including risk information to categorize structures, systems, or components (SSCs). As I understand the approach, it may be viable to use risk-information to supplement criteria that could be used to determine if design-specific SSCs are binned into "safety-related" or "non-safety related" categories early in an application review or during a pre-application review. The staff's paper should include a review of previous Commission policies on the spectrum of new/advanced reactor policy issues that may have used "safety-related" or "non-safety related" SSC classification as part of the policy resolution.



SIGNATURE

4/20/11

DATE

Entered on "STARS" Yes XX No ___